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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,978	12/10/2003	Kazuhito Imai	12014-0023	5105

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EXAMINER	
ZIMMERMAN, JOHN J	

ART UNIT	PAPER NUMBER
1775	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/730,978	IMAI ET AL.	
	Examiner	Art Unit	
	John J. Zimmerman	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/6/04 (election)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 30-36* is/are pending in the application.

4a) Of the above claim(s) *4 and 5* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-12 and 30-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20031210,20040721*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

FIRST OFFICE ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, species 1, in the reply filed on July 6, 2004 is acknowledged. Claims 1-3, 6-12 and 30-36 will be examined with respect to species 1 (barrier layer is an oxide layer based on an oxide of zinc).

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The Information Disclosure Statement filed December 10, 2003 and the Information Disclosure Statement filed July 21, 2004 have been considered. Initialed forms PTO-1449 are enclosed with this Office Action.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Nomoto (Japanese publication 02-190483).

6. Nomoto discloses providing a zinc oxide coating on the surface of a galvanized steel sheet. The weights of ZnO formed on the sheet are shown in Table 1 and the range is described as between 30-3000 mg/m^2 ZnO per side (e.g. see left side column on page 531). The presence of the oxide coating of Nomoto would inherently act as a barrier to zinc vaporization during heating.

7. Claims 1-3, 6-9 and 30-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Toki (Japanese publication 2000-328221).

8. Toki discloses providing a zinc oxide containing coating on the surface of a galvanized steel sheet in the amount of 1-50 mg/m^2 (e.g. see paragraph [0019]) and the coating weight is 30-70 g/m^2 (e.g. see paragraph [0034]). The presence of the oxide coating of Toki would inherently act as a barrier to zinc vaporization during heating. The coating is a galvannealed coating containing 8-15 wt.% Fe (e.g. see paragraph [0018]-[0022], [0037]). The steel composition contains 0.02 wt.% P and 0.02 wt.% Si (e.g. see paragraph [0039]).

9. Claims 1-3, 6-9 and 30-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Toki (Japanese publication 2000-328220).

10. Toki discloses providing a zinc oxide containing coating on the surface of a galvanized steel sheet in the amount of 50 mg/m^2 (e.g. see paragraph [0029]) and the coating weight is 45 g/m^2 (e.g. see the example in paragraph [0043]). The presence of the oxide coating of Toki would inherently act as a barrier to zinc vaporization during heating. The coating can be a galvannealed coating and can contain 8-15 wt.% Fe (e.g. see paragraph [0027]). The steel composition contains 0.01 wt.% P and 0.01 wt.% Si (e.g. see paragraph [0043]).

11. Claims 1-3, 6-9 and 30-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Toki (Japanese publication 2000-160358).

12. Toki discloses providing a zinc oxide containing coating on the surface of a galvanized steel sheet in the amount of 30 mg/m^2 (e.g. see paragraph [0023]) and the coating weight can be 60 g/m^2 (e.g. see paragraph [0041]). The presence of the oxide coating of Toki would inherently act as a barrier to zinc vaporization during heating. The coating is a galvannealed coating containing 8-15 wt.% Fe (e.g. see paragraph [0030]). The steel composition contains 0.02 wt.% P and 0.02 wt.% Si (e.g. see paragraph [0040]).

13. Claims 1-3, 6-7 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Hori (Japanese publication 2000-054161).

14. Hori discloses providing a zinc oxide containing coating on the surface of a galvanized steel sheet in the amount of 100-1000 mg/m^2 (e.g. see paragraph [0015]) and the coating weight is 30-70 g/m^2 (e.g. see example in paragraph [0042]). The presence of the oxide coating of Hori would inherently act as a barrier to zinc vaporization during heating. The coating is a galvannealed coating containing 7-15 wt.% Fe (e.g. see paragraph [0019]. The steel composition contains 0.02 wt.% P and 0.02 wt.% Si (e.g. see paragraph [0039]).

15. Claims 1-3, 6-7 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Hotta (Japanese publication 04-325665).

16. Hotta discloses providing a zinc oxide containing coating on the surface of a galvanized steel sheet in the amount of 20-3000 mg/m^2 (e.g. see paragraph [0007]).

Coating weights and coating compositions are given in paragraph [0012]. The presence of the oxide coating of Hotta would inherently act as a barrier to zinc vaporization during heating.

17. Claims 1-3, 6-7 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanamaru (U.S. Patent 5,525,431).

18. Kanamaru discloses providing a zinc oxide containing coating on the surface of a galvanized steel sheet in the amount of 30-3,000 mg/m^2 (e.g. see column 14, lines 15-29; column 19, lines 11-17) and can contain 20-60 % Fe and 40-80% Zn (e.g. column 16, lines 4-24) and the galvannealed layer coating weight for each example is given in the tables. The presence of the oxide coating of Kanamaru would inherently act as a barrier to zinc vaporization during heating. The coating is a galvannealed coating that can contain 10 wt.% Fe (e.g. see column 21, lines 6-20).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. Claims 10-11 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Hori (Japanese publication 2000-054161) or Hotta (Japanese publication 04-325665), in view of Hori (Japanese publication 2001-303226)

21. Hori '161 and Hotta '665 are discussed above. These references differ from claim 10-11 and 34-35 in that Hori '161 and Hotta '665 do not specify the steel compositions to use for their galvannealed steel sheets. Hori '161 and Hotta '665, however, do disclose that the galvannealed products must have excellent press formability. Hori '226 discloses steel compositions to use in galvannealed products having excellent formability. Hori '226 discloses that steel containing 0.05-0.2 wt.% C and 0.5-3.0 wt.% Mn should be used (e.g. see paragraphs [0026], [0057]). In view of the fact that Hori '226 discloses steels for similar types of galvannealed products with similar end uses as those of Hori '161 and Hotta '665, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the steel composition of Hori '226 for the steel substrates in Hori '161 and Hotta '665 because Hori '226 shows that his steels have the properties that would be suitable for the substrates of Hori '161 and Hotta '665.

22. Claims 12 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Hori (Japanese publication 2000-054161) or Hotta (Japanese publication 04-325665), in view of Hori (Japanese publication 10-140317)

23. Hori '161 and Hotta '665 are discussed above. These references differ from claim 12 and 36 in that Hori '161 and Hotta '665 do not specify the steel compositions to use for

their galvannealed steel sheets. Hori '161 and Hotta '665, however, do disclose that the galvannealed products must have excellent press formability. Hori '317 discloses steel compositions to use in galvannealed products having excellent formability. Hori '226 discloses that steel containing 0-0.005 wt.% B should be used (e.g. see paragraphs [0013], [0044]). In view of the fact that Hori '317 discloses steels for similar types of galvannealed products with similar end uses as those of Hori '161 and Hotta '665, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the steel composition of Hori '317 for the steel substrates in Hori '161 and Hotta '665 because Hori '317 shows that his steels have the properties that would be suitable for the substrates of Hori '161 and Hotta '665.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited prior art serves to further establish the level of ordinary skill in the art at the time the invention was made.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
August 6, 2004